



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,765	02/03/2006	Takashi Ozaki	040509	6791

23850	7590	02/05/2008
KRATZ, QUINTOS & HANSON, LLP		
1420 K Street, N.W.		
Suite 400		
WASHINGTON, DC 20005		

EXAMINER	
MCCALL SHEPARD, SONYA D	

ART UNIT	PAPER NUMBER
2813	

MAIL DATE	DELIVERY MODE
02/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,765	Applicant(s) OZAKI ET AL.	
	Examiner SONYA D. MCCALL SHEPARD	Art Unit 2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/23/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

This office action is in response to application filed on 3 February 2006.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by ULVAC Japan Ltd. (JP 7-109574).

With regard to claim 1, ULVAC Japan Ltd., disclose a substrate treating apparatus comprising a processing chamber for processing at least one substrate, a substrate support member for supporting said at least one substrate, a prechamber for storing said substrate support member, and a control device for regulating the pressure to lower than atmospheric pressure during loading of said substrate support member supporting said at least one substrate from said prechamber into said processing chamber, wherein said substrate support member contains a support section to be contacted said substrate, and a receiving section installed below said support section and extending outwards from a section of the outer periphery of said support section (fig. 1, paragraphs 16 and 17).

With regard to claim 2, ULVAC Japan Ltd. disclose a control device that regulates the pressure during loading so that the pressure is lower than atmospheric pressure, and higher than the pressure when once raising a vacuum within said prechamber prior to said loading (paragraphs 18, 19, 24-30).

With regard to claim 3, ULVAC Japan Ltd. disclose a control device that regulates the pressure during loading so that the pressure is lower than atmospheric pressure, and higher than the pressure during substrate processing (paragraphs 24-30).

With regard to claim 4, ULVAC Japan Ltd. disclose a control device that regulates the pressure during loading so that the pressure is between 200 Pa and 3000 Pa (paragraphs 24-30).

With regard to claim 5, ULVAC Japan Ltd. disclose a substrate treating apparatus comprising a processing chamber for processing at least one substrate, a substrate support member for supporting said at least one substrate in said processing chamber, a heater for heating said at least one substrate in said processing chamber, and depositing a thin film on said at least one substrate by CVD method, wherein said substrate support member contains a support section to be contacted said at least one substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section, and said receiving section catches the particles generated on said support section (fig. 1, paragraphs 16 and 17).

With regard to claim 6, ULVAC Japan Ltd. disclose a control member to regulate the processing temperature to 800°C or less (paragraph 28).

With regard to claim 7, ULVAC Japan Ltd. disclose a control member to regulate the processing temperature between 400°C and 800°C (paragraph 28).

With regard to claim 8, ULVAC Japan Ltd. disclose a thin film is a silicon film or a silicon nitride film (paragraph 24).

With regard to claim 9, ULVAC Japan Ltd. disclose a substrate treating apparatus comprising a processing chamber for processing at least one substrate, and a substrate support member for supporting said at least one substrate in said processing chamber, wherein said substrate support member contains a support section to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section, and said receiving section extends between 6mm and 15mm from a section of the outer periphery of said support section (fig. 1).

With regard to claim 10, ULVAC Japan Ltd. disclose a substrate treating apparatus comprising a processing chamber for processing at least one substrate, and a substrate support member for supporting said at least one substrate in said processing chamber, wherein said substrate support member contains a main section, and a support section to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of

said support section, and said main section, said support section, and said receiving section are integrated into one piece (fig. 1).

With regard to claim 11, ULVAC Japan Ltd. disclose a manufacturing method for a semiconductor device, said method comprising the steps of: supporting at least one substrate in a substrate support member containing a support section to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section; loading said substrate support member supporting said at least one substrate at a pressure lower than atmospheric pressure into said processing chamber; processing said substrate supported by said substrate support member in said processing chamber; and unloading said substrate support member supporting said substrate from said processing chamber (fig. 1, paragraphs 24-30).

With regard to claim 12, ULVAC Japan Ltd. disclose a pressure in a loading step is higher than the pressure when once raising a vacuum in the prechamber prior to loading, and is lower than the atmospheric pressure (paragraphs 24-30).

With regard to claim 13, ULVAC Japan Ltd. disclose a pressure in a loading step is higher than the pressure during a substrate processing and is lower than the atmospheric pressure (paragraphs 24-30).

With regard to claim 14, ULVAC Japan Ltd. disclose a pressure in a loading step is between 200 Pa and 3000 Pa (paragraphs 24-30).

With regard to claim 15, ULVAC Japan Ltd. disclose a manufacturing method for a semiconductor device, said method comprising the steps of: loading at least one substrate into a processing chamber; supporting said at least one substrate by a substrate support member made up of a support section to be contacted said substrate, and a receiving section formed below said support section and extending outwards from a section of the outer periphery of said support section for catching particles generated in said support section; depositing a thin film by CVD method on said at least one substrate supported by said substrate support member in said processing chamber; and unloading said substrate from said processing chamber (paragraph 16, 17 and 24-30).

With regard to claim 16, ULVAC Japan Ltd. disclose a temperature in a depositing step is 800°C or less (paragraphs 24-30).

With regard to claim 17, ULVAC Japan Ltd. disclose a temperature in a depositing step is between 400°C and 800°C (paragraphs 24-30).

With regard to claim 18, ULVAC Japan Ltd. disclose a thin film deposited on a substrate in a depositing step is a silicon film or a silicon nitride film (paragraphs 24-30).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SONYA D. MCCALL SHEPARD whose telephone

number is (571)272-9801. The examiner can normally be reached on Monday - Friday 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. D. M./

Examiner, Art Unit 2813

